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Canadian Forestry Service-Maritimes

TECHNICAL NOTE

FOREST INSECTS AND DISEASES IN FUNDY NATIONAL PARK IN 1987

Personnel of the Forest Insect and Disease Survey regularly survey national parks for forest insect and disease conditions. Some of these conditions encountered in Fundy National Park in 1987 are discussed briefly below.

Spruce budworm - is the best known and most destructive insect of balsam fir and spruce in New Brunswick and has killed many old stands in Fundy National Park. As dead trees fall to the forest floor, a new young forest pushes upward. Regeneration is plentiful in the Park. Spruce budworm populations have been declining rapidly in the Park for the past five years. Records from light traps show 6,106 moths caught in 1983, down to only 5 moths in 1987. Only minimal feeding occurred.

Beech bark disease - this disease is the result of a complex interaction between a scale insect and a fungus. The fungus, Nectria coccinea var. faginata, is dependent on attack by the insect before infection occurs. Attack deforms and often kills trees. The condition of beech in the Park is similar to that in other parts of the Region: healthy trees without pock-marked or gnarly, cankered stems, often covered with the white woolly substance, are hard to find.

Deterioration of white birch. Early leaf browning and premature leaf fall has occurred along the Fundy Coast in most years since 1979. As a result of this condition, trees have deteriorated. At an observation plot in the Park the number of healthy trees decreased from 100% to 18% between 1982 and 1986. In 1987, leaf discoloration was light all along the Fundy Coast and only trace to light browning occurred at the plot in Fundy National Park.

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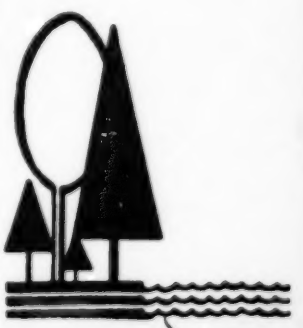

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Other organisms which affected birch in the Park were: **leaf spot fungus**, caused brownish leaf spots; **birch casebearer**, an insect which constructs a cigar-shaped case from leaf fragments and feeds on the foliage from within this case, caused light browning; **birch leafroller**, which tightly rolls up white birch leaves, caused light leafrolling; **wax filament scale**, a small orange-red insect, covered with white woolly wax, was present on 46% of trees in the special white birch plot.

Cherry blight is a disease of pin cherry which occurs in late spring and early summer, though symptoms remain visible throughout the summer. Clumps of leaves wilt, turn brown, and curl, and lesions or cankers on stems produce a gummy substance. In 1987, light infection occurred on pin cherry at scattered locations in the Park.

Gypsy moth has been the most destructive insect of forest and shade trees in the northeastern United States and has caused major problems in Quebec and Ontario. Female moths are flightless, making the spread of this pest largely dependent on transport of eggs or larvae on human conveyances. Trapping male moths with pheromone traps to help detect gypsy moth has been carried out in New Brunswick since 1971, with many adults being caught each year. In 1981, egg masses and pupal cases were found for the first time in Charlotte County, N.B. The first area of defoliation was found in 1987 at Moores Mills, Charlotte County, where about 5 hectares of hardwoods - softwoods and ground vegetation was severely defoliated.

Fundy National Park staff have participated in the pheromone trapping program since the early 70's. In 1987, 3 adults were caught in the 22 traps placed, but no other life stages of the gypsy moth have been found. Visitors are requested to report any suspected gypsy moth to Park personnel. Larvae are large and have five pairs of blue and six pairs of red dots along the back as well as long hairs on all parts of the body.

Porcupine damage to balsam fir and white spruce continues to be very noticeable throughout the Park. The red trees and yellowish white stems, where the bark has been eaten off, are the indicators of porcupine attack. Feeding all around the stem kills the tree.

Other organisms of interest - spruce budmoths defoliated 27% of white spruce on the Laverty Trail, reducing tree growth and producing very bushy-topped trees. The red, drooping needles and shoots of red pine caused by **Sirococcus** was common near Park Headquarters and at the Junction of the Point Wolfe and Herring Cove Roads. **Balsam fir needle rust**, which causes yellowing of needles on young balsam fir, was light at Laverty Trail.

A report, Pests that Changed the Forests of Fundy National Park by F.A. Titus, Information Report M-X-165., is available on request from the Canadian Forestry Service.

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Forest Insect and Disease Survey

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